

In all years displayed, Montana's overall (i.e. all-cause) age-adjusted death rates are below or about equal to those for the U.S. and both have declined over time. Montana's age-adjusted death rates are also below those for the U.S. for many of the chronic diseases displayed; Montana's rates for heart disease, cancer, and nephritis (nephritis, nephrotic syndrome, and nephrosis) were lower than those for the U.S. in six or seven of the seven years for which both Montana and U.S. values are displayed. Montana's rates for, chronic liver disease and cirrhosis were lower than U.S. rate in both the year 2000 but about the same or higher in all other years.

The state's rates for chronic lower respiratory disease (C.L.R.D.)--which includes chronic and unspecified bronchitis, emphysema, and asthma--were higher than those for the U.S. in all years in which rates for both Montana and the U.S. are displayed. Montana's death rate from Alzheimer's disease was higher than U.S. rates in six of the seven years in which both are displayed.

The patterns displayed for other chronic diseases were less conclusive. Montana's death rates for cerebrovascular disease, influenza and pneumonia, and diabetes showed inconsistent relationships with the U.S. rates, with the trend lines crossing each other more than once in this period.

Montana's rates for one traumatic cause of death—homicide and legal intervention—were lower than the corresponding U.S. rates in all years displayed. Montana's rates for the remaining traumatic causes of death—accident (both motor vehicle and non-motor- vehicle) and suicide rates—were substantially higher than those for the nation.

These graphs show secular (i.e. long-term, despite occasional instability in the short-term) reductions in Montana's age-adjusted death rates for specific chronic diseases such as heart disease, cancer, influenza and pneumonia, and cerebrovascular disease. The rates for chronic liver disease and cirrhosis are on the increase, although the trends are somewhat unstable. The rates for Alzheimer's, nephritis, C.L.R.D., and diabetes are neither increasing nor decreasing consistently.

The rate for suicide has increased since 1999 and is often about twice the U.S. rate. Both the U.S. and Montana rates for accidents of all types are increasing, although Montana's are much higher than those for the U.S. Montana's rates for motor vehicle accidents are not only higher than U.S. rates, they are also increasing while U.S. rates are stable.

AGE, SEX, AND RACE

Different causes of death are likely to be associated with different ages, sexes, and races of the decedent. Males were more likely than females to die of many of the leading causes of death found in Vital Statistics reference tables. For instance, more males than females died of suicide, chronic liver disease and cirrhosis, heart disease, and accidents. On the other hand, more females than males died of cerebrovascular diseases, influenza and pneumonia, and Alzheimer's disease. There was a large difference between the numbers of male and female deaths from traumatic causes. Males accounted for nearly 63% of the accidental deaths. More than twice as many males as females died of homicide. Finally, nearly four times as many males as females committed suicide. In contrast, much more nearly equal numbers (and proportions) of males and females died of heart disease, cancer, and CLRD. **Figure 42** displays frequencies of death for Montanans in 2007 by race, sex, and selected major cause of death.

Figure 42

**FREQUENCY OF DEATH BY SELECTED CAUSE, RACE, AND SEX
MONTANA RESIDENTS, 2007**

Cause of Death	All Races Male	All Races Female	White Male	White Female	Native American Male	Native American Female
ALL CAUSES	4,342	4,228	4,081	4,002	246	208
DISEASES OF HEART	1,032	828	990	802	38	25
MALIGNANT NEOPLASMS (CANCER)	984	922	933	881	46	35
ACCIDENTS	379	224	333	191	45	30
CHRONIC LOWER RESPIRATORY DISEASES	300	304	287	286	12	16
CEREBROVASCULAR DISEASES	168	269	161	258	7	10
INTENTIONAL SELF-HARM (SUICIDE)	152	40	144	36	8	4
DIABETES MELLITUS	136	122	122	110	13	11
CHRONIC LIVER DISEASE AND CIRRHOSIS	94	45	76	32	2	4
ALZHEIMER'S DISEASE	83	177	81	173	18	13
INFLUENZA AND PNEUMONIA	76	104	72	103	3	1
NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS	52	57	52	51	-	6
PNEUMONITIS DUE TO SOLIDS AND LIQUIDS	37	45	36	43	1	2
HOMICIDE	17	6	12	3	5	3
ALL OTHER CAUSES	832	1,085	782	1,033	48	48

As mentioned in the Technical Overview of this report, the Montana death certificate, beginning in 2003, records race in greater detail than in the past. Not only are more racial categories used, but informants are also specifically asked to name all of the several classifications that may apply to a decedent. The result of this additional prompting has been a much greater proportion of decedents classified by two or more races. In order to calculate mortality rates by race, NCHS has provided OVS the most likely “bridged,” or main, race for each decedent. These bridged race classifications are described in the introduction of this report and are used in the report’s figures and mortality reference tables. This different manner of counting deaths by race could very possibly alter the outcome of age-specific or cause-specific mortality ratios calculated for the various races and affect apparent racial disparities. **Figure 43** displays the distribution of decedents by race for the last decade, by year of death.

Figure 43

**FREQUENCY AND PERCENT DISTRIBUTION OF DEATH BY RACE*
MONTANA RESIDENTS, 1998-2007**

RACE	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
ALL RACES	7,984	8,082	8,071	8,252	8,473	8,443	8,083	8,497	8,435	8,570
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
WHITE	7,615	7,618	7,668	7,839	8,003	7,977	7,613	8,019	7,918	8,083
Percent	95.4	94.3	95.0	95.0	94.5	94.5	94.2	94.4	93.9	94.3
NATIVE AMERICAN	345	429	366	385	433	425	437	443	481	454
Percent	4.3	5.3	4.5	4.7	5.1	5.0	5.4	5.2	5.7	5.3
OTHER OR UNKNOWN RACE	24	35	37	28	37	41	33	35	36	33
Percent	0.3	0.4	0.5	0.3	0.4	0.5	0.4	0.4	0.4	0.4

* Only single racial classifications were reported on the Montana death certificate in years prior to 2003. In subsequent years multiple races were reported and, for those records on which more than one race was reported, a single main or “bridged” race was chosen from among the reported races.

Slightly more than a fifth of the Native Americans who died in 2007 died of one of the traumatic causes—suicide, homicide, or accident—while only about half that proportion of the deaths of whites were attributed to these causes.

Accidents caused a greater proportion of the deaths among the young than the old. They accounted for 14.3% of the deaths of those 14 years of age or younger, 62.1% of the deaths of those between the ages of 15 and 24, and 50.0% of those between the ages of 25 and 34 years. By contrast, accidents accounted for less than 3% of the deaths of those aged 65 or older.

Suicide was the cause of death for 14.5% of the decedents between the ages of 15 and 44. By contrast, it was the cause of death for only 2.2% of decedents of all ages. Of the suicide victims, four-fifths were males.

As age at death increases, chronic diseases—particularly heart disease and cancer—become more frequent as the cause of death. Cancer and heart disease were the leading causes of death for the age categories between 45 and 84 years—28.8% and 20.7% of the deaths in that age group, respectively. However, for the age categories 85 and older, heart disease was the leading cause, with cancer second—27.1% and 13.3%, respectively. For the all-age category, cancer (22.2%) was the leading cause of death, followed closely by heart disease (21.7%). Frequencies of death by cause for various age groups are shown in **Figure 44**. Frequencies and crude rates for the ten leading causes of death (for decedents of all ages) are shown for Montana and each of its counties in **Table S-5**.

Figure 44

**FREQUENCY OF DEATH BY SELECTED LEADING CAUSES
OF DEATH AND AGE
MONTANA RESIDENTS, 2007**

CAUSE OF DEATH	TOTAL	UNDER 1 YEAR	1-4 YEARS	5-14 YEARS	15-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75-84 YEARS	85 OR MORE
TOTAL, ALL CAUSES	8,570	76	17	19	145	132	228	649	961	1,335	2,240	2,768
HIV INFECTION	5	0	0	0	0	0	2	3	0	0	0	0
CANCER	1,906	0	2	1	8	8	21	152	316	475	554	369
DIABETES	258	0	0	0	2	1	7	18	40	57	72	61
ALZHEIMER'S DISEASE	260	0	0	0	0	0	0	0	2	18	67	173
HEART DISEASE	1,860	1	1	1	4	6	23	110	205	263	497	749
CEREBROVASCULAR DISEASE	437	1	0	0	0	0	6	17	34	47	123	209
ATHEROSCLEROSIS	24	0	0	0	0	0	0	2	4	3	7	8
PNEUMONIA AND INFLUENZA	180	1	0	0	0	0	2	4	5	13	50	105
CHRONIC LOWER RESPIRATORY DISEASES	604	0	1	0	0	0	1	17	48	162	232	143
CHRONIC LIVER DISEASE AND CIRRHOSIS	139	0	0	0	1	2	13	47	36	21	17	2
NEPHRITIS, NEPHROTIC SYNDROME AND NEPHROSIS	109	0	0	0	1	0	1	6	5	18	30	48
CONDITIONS ORIGINATING IN PERINATAL PERIOD	20	20	0	0	0	0	0	0	0	0	0	0
CONGENITAL MALFOMATIONS & CHROMOSOMAL ANOMALIES	34	25	2	2	0	0	1	1	1	2	0	0
SUDDEN INFANT DEATH SYNDROME	11	11	0	0	0	0	0	0	0	0	0	0
ACCIDENT	603	1	7	8	90	66	72	95	76	44	66	78
SUICIDE	192	0	0	3	20	24	29	45	34	9	16	12
HOMICIDE	23	0	0	0	8	5	3	5	2	0	0	0
OTHER CAUSES	1,905	16	4	4	11	20	47	127	153	203	509	811